



California Natural Resources Agency
DEPARTMENT OF FISH AND GAME
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March 10, 2010

ARNOLD SCHWARZENEGGER, Governor
John McCamman, Director



Review of Criteria Derivation Draft for Lambda Cyhalothrin

Thank you for the opportunity to review the drafts of water quality criteria for the pesticide lambda cyhalothrin. As the agency charged with protection of fish and wildlife in California, the Department of Fish and Game developed and proposed water quality criteria in the past that were protective of aquatic life in California's water bodies.

There have been several methodologies developed in recent years to generate water quality criteria, and these all have advantages and disadvantages. Rather than assess the method(s) used here, my comments pertain to the ability of the proposed values to protect aquatic life and comply with Basin standards.

Your proposed acute and chronic criteria for lambda cyhalothrin are both 1 ng/L. The lowest available acute toxicity value is 2.3 ng/L for amphipod *Hyaella azteca*. Field studies have supported that amphipods are more sensitive to pyrethroids than are cladocerans. As the proposed acute criterion is less than half of the value for amphipods, it is likely to be adequately protective of sensitive organisms.

The chronic criterion was derived using acute-to-chronic ratios (ACRs) from two freshwater and one saltwater species. The final ACR value was 4.73. The acute median 5th percentile value of 2.432 ng/L was divided by the final ACR to give a chronic criterion of 0.5 ng/L, which was rounded up to 1 ng/L. This value is the approximate detection level of lambda cyhalothrin. At this time, it appears that this is an appropriate chronic criterion.

Thank you for the opportunity to comment on this issue. Please contact me at (916) 358-2954 if you have any questions.

Sincerely,

Stella McMillin
Department of Fish and Game
Pesticide Investigations Unit